

### REMARKS

Enclosed is a check for the requisite fee for a two-month extension of time. Any fees that may be due in connection with the filing of this paper or with this application may be charged to Deposit Account No. 06-1050. If a Petition for extension of time is needed, this paper is to be considered such Petition. A supplemental Information Disclosure Statement is filed on this date under separate cover.

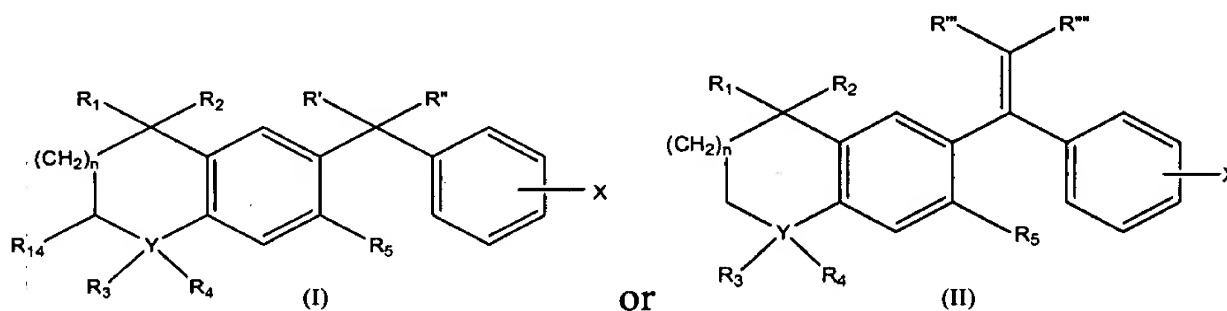
Claims 74, 75, 82 and 83 are pending. Claims 71 and 79-81 are cancelled without prejudice or disclaimer. Applicant expressly reserves the right to file divisional/continuation applications to the cancelled subject matter. Claims 74 and 75 are amended to more distinctly claim the subject matter. Basis for the amendments is found throughout the specification (*e.g.*, see the original claims as filed). Basis for claims 82 and 83 is found throughout the specification (*e.g.*, see original claim 4). No new matter is added.

### REJECTION OF CLAIMS 71, 75, 79 AND 81 UNDER 35 U.S.C. §112, FIRST PARAGRAPH - ALLEGED NEW MATTER

Claims 71, 75, 79 and 81 are rejected under 35 U.S.C. §112, first paragraph, allegedly for containing subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventor, at the time the application was filed, had possession of the claimed subject matter. The Examiner alleges that the limitation of R''' to be hydrogen and an alkyl and R'''' to be an alkyl group represents a departure from the specification and claims as originally filed. The Examiner admits that Example 51 of the specification describes a compound where R''' and R'''' are methyl, but alleges that this does not lend support for an alkyl group for the full scope of Formula I and II. This rejection is respectfully traversed.

### The Claims

Claim 75 is directed to a compound of formula I or II:



where R<sub>1</sub> is hydrogen or a lower alkyl including 1-4 carbon atoms; R<sub>2</sub> is hydrogen or a lower alkyl including 1-4 carbon atoms; Y is C; R<sub>3</sub> is hydrogen or a lower alkyl including 1-4 carbon atoms; R<sub>4</sub> is hydrogen or a lower alkyl including 1-4 carbon atoms; R<sub>5</sub> is OR<sub>7</sub>, where R<sub>7</sub> is hydrogen or a lower alkyl including 1-6 carbon atoms; R<sub>14</sub> is hydrogen or a lower alkyl

including 1-4 carbon atoms; R' and R'' represent hydrogen or a lower alkyl including 1-4 carbon atoms; R''' and R'''' represent hydrogen or a lower alkyl including 1-4 carbon atoms; X is COOH and originates from C3, C4, or C5 of the ring; and n is 0 or 1; or a pharmaceutically acceptable ester, amide or salt thereof.

## ANALYSIS

### 1. Claims 71 and 79-81

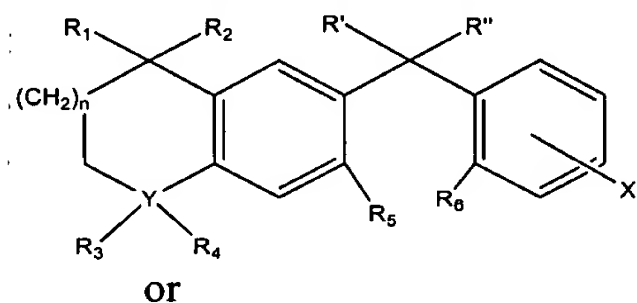
Claims 71 and 79-81 are cancelled herein. Thus, as applied to claims 71 and 79-81, the rejection is moot.

### 2. Claim 75

Formula I of pending claim 75 does not include substituents R''' and R'''. Hence, as applied to Formula I, the rejection is inapt. Formula II of pending claim 75 recites that substituents R''' and R''' represent hydrogen or a lower alkyl including 1-4 carbon atoms. Basis for this is found in claim 4 as originally filed.

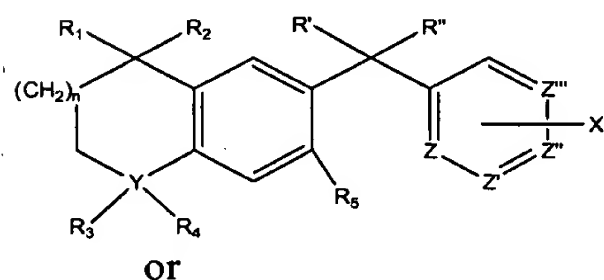
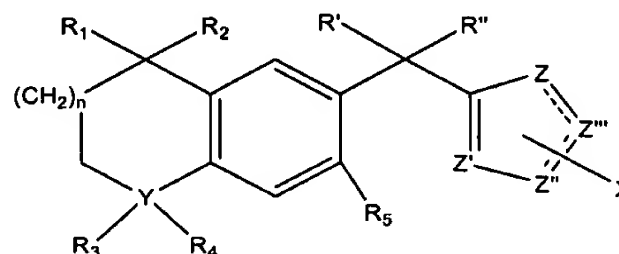
#### Original claim 4 recites:

A compound having the formula:



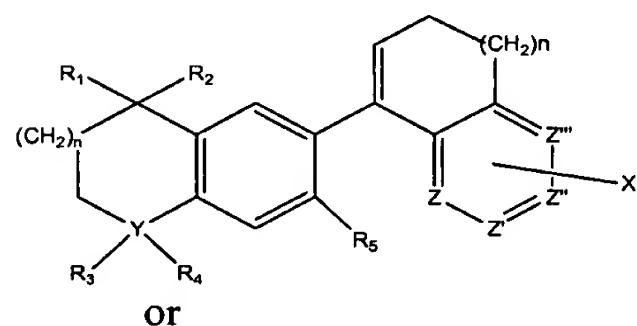
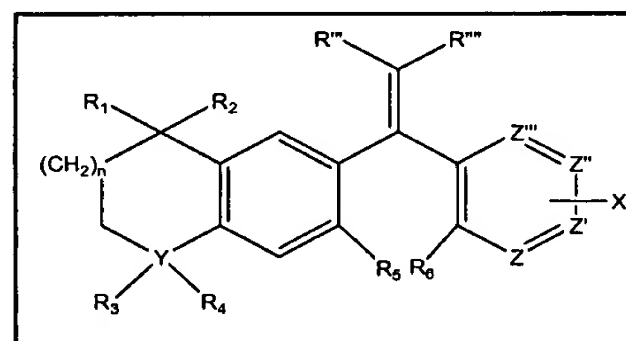
or

OR



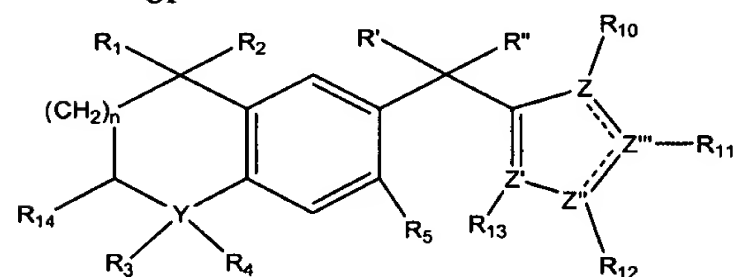
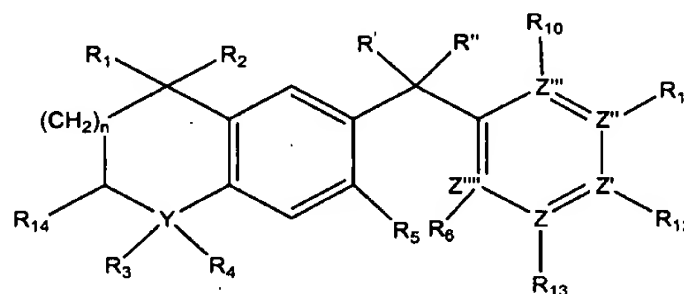
or

OR



or

OR



wherein

**R<sub>1</sub> and R<sub>2</sub> each independently represents hydrogen or a lower alkyl or acyl having 1-4 carbon atoms;**

**Y represents C, O, S, N, CHOH, CO, SO, SO<sub>2</sub> or a pharmaceutically acceptable salt;**

**R<sub>3</sub> represents hydrogen or a lower alkyl comprising 1-4 carbon atoms where Y is C or N;**

**R<sub>4</sub> represents hydrogen or lower alkyl having 1-4 carbon atoms where Y is C, but R<sub>4</sub> does not exist if Y is N, and neither R<sub>3</sub> or R<sub>4</sub> exist if Y is S, O, CHOH, CO, SO, or SO<sub>2</sub>;**

**R' and R'' represent hydrogen, lower alkyl or acyl having 1-4 carbon atoms, OH, alkoxy having 1-4 carbon atoms, thiol or thio ether, or amino,**

**or R' and R'' taken together form an oxo (keto), methano, thioketo, HO-N=, NC-N=, (R<sub>7</sub>R<sub>8</sub>)-N-N=, R<sub>17</sub>O-N=, R<sub>17</sub>N=, epoxy, cyclopropyl, or cycloalkyl group and wherein the epoxy, cyclopropyl and cycloalkyl groups can be substituted with lower alkyl having 1-4 carbons or halogen;**

**R''' and R'''' represent hydrogen, halogen, lower alkyl or acyl having 1-4 carbon atoms, and alkyl amino,**

**or R''' and R'''' taken together form a cycloalkyl group having 3-10 carbons, and wherein the cycloalkyl group can be substituted with lower alkyl having 1-4 carbons or halogen;**

**R<sub>5</sub> represents hydrogen, a lower alkyl having 1-4 carbons, halogen, nitro, OR<sub>7</sub>, SR<sub>7</sub>, NR<sub>7</sub>R<sub>8</sub>, or (CF)<sub>n</sub>CF<sub>3</sub>, but R<sub>5</sub> cannot be hydrogen if together R<sub>6</sub>, R<sub>10</sub>, R<sub>11</sub>, R<sub>12</sub> and R<sub>13</sub> are all hydrogen, Z, Z', Z'', Z''' and Z'''' are all carbon and R' and R'' represent N, OH, C<sub>1</sub>-C<sub>4</sub> alkoxy or C<sub>1</sub>-C<sub>4</sub> acyloxy or R' and R'' taken together form an oxo, methano or hydroxyimino group;**

**R<sub>6</sub>, R<sub>10</sub>, R<sub>11</sub>, R<sub>12</sub> and R<sub>13</sub> each independently represents hydrogen, a lower alkyl having 1-4 carbons, halogen, nitro, OR<sub>7</sub>, SR<sub>7</sub>, NR<sub>7</sub>R<sub>8</sub>, or (CF<sub>2</sub>)<sub>n</sub>CF<sub>3</sub>, and exist only if the Z, Z', Z'', Z''', or Z'''' from which it originates is C, or each independently represent hydrogen or a lower alkyl having 1-4 carbons if the Z, Z', Z'', Z''', or Z'''' from which it originates is N, and where one of R<sub>6</sub>, R<sub>10</sub>, R<sub>11</sub>, R<sub>12</sub> or R<sub>13</sub> is X;**

**R<sub>7</sub> represents hydrogen or a lower alkyl having 1-6 carbons;**

**R<sub>8</sub> represents hydrogen or a lower alkyl having 1-6 carbons;**

**R<sub>9</sub> represents a lower alkyl having 1-4 carbons, phenyl, aromatic alkyl, or q-carboxyphenyl q-hydroxyphenyl, q-bromophenyl, q-chlorophenyl, q-fluorophenyl, or q-iodophenyl, where q=2-4;**

**R<sub>14</sub> represents hydrogen, a lower alkyl having 1-4 carbons, oxo, hydroxy, acyl having 1-4 carbons, halogen, thiol, or thioketone;**

**R<sub>17</sub> represents hydrogen, lower alkyl having 1-8 carbons, alkenyl (including halogen, acyl, OR<sub>7</sub> and SR<sub>7</sub> substituted alkenes) R<sub>9</sub>, alkyl carboxylic acid (including halogen, acyl, OR<sub>7</sub> and SR<sub>7</sub> substituted alkyls), alkenyl carboxylic acid (including halogen, acyl, OR<sub>7</sub> and SR<sub>7</sub> substituted alkenes), alkyl amines (including halogen, acyl, OR<sub>7</sub> and SR<sub>7</sub> substituted alkyls), and alkenyl amines (including halogen, acyl, OR<sub>7</sub> and SR<sub>7</sub> substituted alkenes);**

**X is COOH, tetrazole, PO<sub>3</sub> H, SO<sub>3</sub> H, CHO, CH<sub>2</sub>OH, CONH<sub>2</sub>, COSH, COOR<sub>9</sub>, COSR<sub>9</sub>, CONHR<sub>9</sub>, or COOW where W is a pharmaceutically acceptable salt, and where X can originate from any C or N on the ring;**

**Z, Z', Z'' and Z''' each independently represent C, S, O, N or a pharmaceutically acceptable salt, but is not O or S if attached by a double bond to another such Z which is O or S, and is not N if attached by a single bond to another such Z which is N;**

**n = 0-3; and**

**the dashed lines in the second and seventh structures shown depict optional double bonds.**

**Thus**, Formula II of instant claim 75 is the fourth formula (shown above in a box) of claim 4 of the instant patent application as filed, where (as shown above in **bold**):

each of Z, Z', Z" and Z''' is C;

R<sub>1</sub> R<sub>2</sub>, R<sub>3</sub> and R<sub>4</sub> each independently is hydrogen or a lower alkyl having 1-4 carbon atoms;

R<sub>5</sub> is OR<sub>7</sub>, where R<sub>7</sub> is hydrogen or a lower alkyl including 1-6 carbon atoms;

R<sub>6</sub> is hydrogen;

R''' and R'''' each independently is hydrogen or a lower alkyl having 1-4 carbon atoms;

X is COOH and originates from C3, C4, or C5 of the ring; and

n is 0 or 1.

As shown above, the definition for R''' and R'''' in original claim 4 of the instant application recites:

R''' and R'''' represent hydrogen, halogen, lower alkyl or acyl having 1-4 carbon atoms, alkyl amino

Thus, the recitation in instant claim 75 that R''' and R'''' each independently represent hydrogen or a lower alkyl having 1-4 carbon atoms is among the alternatives originally set forth for the definition of R''' and R'''' in the original claims directed to compounds of Formula II.

Therefore, the amendment of claim 75 to recite that R''' and R'''' each represent hydrogen or lower alkyl having 1-4 carbon atoms finds basis in the application as filed.

#### **REJECTION OF CLAIMS 71, 74, 75 AND 79-81 UNDER 35 U.S.C. § 112, FIRST PARAGRAPH – ENABLEMENT**

Claims 71, 74, 75 and 79-81 are rejected under 35 U.S.C. § 112, first paragraph because the specification, while being enabling for compounds where substituent Y is carbon, allegedly does not reasonably provide enablement for all the compounds where Y is N, S or O or for their "pharmaceutical use." The Examiner alleges that the specification does not enable a skilled artisan to make and/or use the subject matter commensurate with the scope of the pending claims. The Examiner alleges that there is no data in the specification that the compounds have some "pharmaceutical" use because "there are no *in vivo* tests for the full scope of the claims that these compounds do 'treat' cell proliferation." None of the pending claims are directed to methods or a "pharmaceutical use." In light of the amendment of the claims herein, where Y is carbon for all claimed compounds, this rejection is moot.

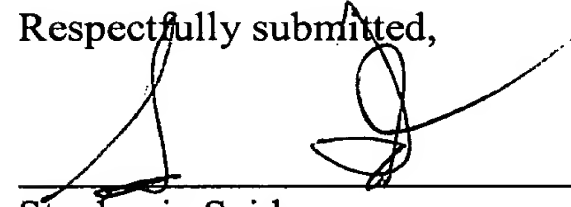
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Applicant : Marcus F. Boehm *et al.*  
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Attorney's Docket No.: 21912-002009 / 1002H  
**Amendment & Response**

In view of the above, reconsideration and allowance of the application are respectfully requested.

Respectfully submitted,



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